IN THE CLAIMS:

Please add the following new claims.

--54(New). In a wireless communications network including a plurality of communication units, wherein at least one of those units is designated as a relay unit for transferring network information, a communication unit to transmit and receive messages within said network comprising:

a transmitter to transmit an outgoing message in the form of radio signals to each neighboring unit of said communication unit;

a receiver to receive an incoming message in the form of radio signals from said each neighboring unit;

a storage unit to store network information relating to said communication unit and corresponding neighboring units; and

a processor to control said transmission and reception of said outgoing and incoming messages, wherein said processor includes:

a configuration module to examine network connectivity information and designate at least one communication unit as said relay unit based on said examination and in response to determining that said at least one communication unit facilitates communications with network communication units that are outside the range of and greater than one hop away from said communication unit.

55(New). The unit of claim 54, wherein said network is an ad-hoc wireless communications network.

56(New). The unit of claim 54, wherein said processor further includes:

a status transmission module to facilitate transmission of a unit status message at a periodic time interval, wherein said unit status message includes network connectivity information.

57(New). The unit of claim 56, wherein said processor further includes:

an interval module to adjust said periodic time interval to accommodate network conditions.

58(New). The unit of claim 54, wherein said plurality of communication units include member units and said designated relay units, and wherein said relay units generate and forward network connectivity information through said network.

59(New). In a wireless communications network including a plurality of communication units, wherein at least one of those units is designated as a relay unit for transferring network information, a method of configuring a network communication unit to transmit and receive messages within said network comprising the steps of:

(a) examining network connectivity information relating to said communication unit and corresponding neighboring units stored in a storage unit of said communication unit; and

(b) designating at least one communication unit as said relay unit based on said examination and in response to determining that said communication unit facilitates communications with network communication units that are outside the range of and greater than one hop away from said communication unit.

60(New). The method of claim 59, wherein said network is an ad-hoc wireless communications network.

61(New). The method of claim 59, wherein step (a) further includes:

(a.1) transmitting a unit status message at a periodic time interval, wherein said unit status message includes network connectivity information.

62(New). The method of claim 61, wherein step (a) further includes:

(a.2) adjusting said periodic time interval to accommodate network conditions.

63(New). The method of claim 59, wherein said plurality of communication units include member units and said designated relay units, and said method further includes:

(c) generating and forwarding network connectivity information through said network via said designated relay units.

64(New). A wireless communications network comprising:

a plurality of communication units to transmit and receive messages in the form of radio signals within said network, wherein said communication units examine network connectivity information and designate at least one communication unit as a relay unit to transfer network information based on said examination and in response to determining that said at least one communication unit facilitates communications with communication units that are outside the range of and greater than one hop away from corresponding network communication units.

65(New). The network of claim 64, wherein said network is an ad-hoc wireless communications network.

66(New). The network of claim 64, wherein said communication units each include:

a status transmission module to facilitate transmission of a unit status message at a periodic time interval, wherein said unit status message includes network connectivity information.

67(New). The network of claim 66, wherein said communication units each further include:

an interval module to adjust said periodic time interval to accommodate network conditions.

68(New). The network of claim 64, wherein said designated relay units generate and forward network connectivity information through said network.--